REMARKS

Claims 1, 2, 4-8, 11, 12, 14-17, 20, 21 and 23 are now present in this application.

Claims 1 and 11 have been amended, claims 9 and 18 have been cancelled without prejudice or disclaimer, and claim 23 has been presented. Reconsideration of the application, as amended, is respectfully requested.

Amendments to the Claims

Independent claims 1 and 11 have been amended to recite that the ceramic cover closely surrounds the upper portion of the conductive layer with substantially no gap therebetween. Support for this limitation can be found in originally filed Figs. 3 and 4. It is therefore respectfully submitted that no new matter is present in the foregoing amendments.

With regard to newly presented claim 23, this claim includes certain limitations from original claim 13. In particular, claim 23 recites that "the conductive layer further comprises a bottom portion, and the width of the upper portion is less than the width of the bottom portion." Support for this newly presented claim can be found on page 9, lines 12-15 and Fig. 3 of the originally filed application. It is therefore respectfully submitted that no new matter is present in the foregoing amendments.

Rejection under 35 USC 112

The Examiner has confirmed in the Advisory Action that the rejection of claim 13 under 35 USC 112, second paragraph has been overcome. No further comments are therefore necessary.

Rejection under 35 USC 103

Claims 1-2, 4-7 and 11-16 stand rejected under 35 USC 103 as being unpatentable over Hirano et al., U.S. Patent 5,411,624, in view of Drage, U.S. Patent 4,793,975. This rejection is respectfully traversed.

Claims 8 and 17 stand rejected under 35 USC 103 as being unpatentable over Hirano et al. and Drage, in view of the Applicant's Admitted Prior Art. This rejection is respectfully traversed.

Claims 9 and 18 stand rejected under 35 USC 103 as being unpatentable over Hirano et al. and Drage and further in view of Maki, U.S. Publication 2005/0098120. This rejection is respectfully traversed.

Claims 20-22 stand rejected under 35 USC 103 as being unpatentable over Hirano et al. in view of the Applicant's Admitted Prior Art, Maki and Drage. This rejection is respectfully traversed.

Claims 1 and 11

It is respectfully submitted that none of the prior art utilized by the Examiner teaches or suggests that the ceramic cover closely surrounds the upper portion of the conductive layer with substantially ***no gap*** therebetween, as is set forth in independent claims 1 and 11 of the present application.

Hirano et al. teaches that a gap exists between the rings 22, 24 and the first susceptor 12 in Figs 1 and 2. Hirano et al. further teaches that a gap exists between the ring 22 and the first susceptor 12 in Figs 9-11 and 17-18.

With regard to Drage, this patent teaches a lower electrode 10 comprising an annular depression 11 defining a central pedestal 12 for receiving a semiconductor wafer and a lower electrode 32 comprising having similar structure as the lower electrode 10. Drage does not teach or suggest that the central pedestal 12 is an "upper" portion. The Examiner's attention is drawn to the fact that the central pedestal 12 is as high as the ring 10, and a central portion of the lower electrode 32 is as high as the edge thereof (see column 1, lines 25-27, column 3, line 16, and Figs. 1 and 3). Moreover, Drage does not teach or suggest an insulating base or the like being embedded in the lower electrode 10 or 32. Since Drage does not teach or suggest an insulating base or the like being embedded in the lower electrode 10 or 32, Drage cannot teach or suggest any relation between the insulating base or recess thereof and the lower electrode 10 or 32. Thus, the combination of Hirano et al. and Drage fails to teach or suggest that "the ceramic cover closely surrounds the upper portion of the conductive layer with substantially no gap therebetween," as is recited in independent claims 1 and 11 of the present application.

In view of the foregoing amendments and remarks, it is respectfully submitted that the prior art utilized by the Examiner, either alone or in combination, fails to teach or suggest the pedestal of independent claims 1 and 11 of the present application, as well as their dependent claims. Reconsideration and withdrawal of this portion of the 35 USC 103 rejection are respectfully requested.

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Claim 20

It is respectfully submitted that none of the prior art utilized by the Examiner either teaches or suggests a titanium layer having a bottom portion embedded in the recess, as is recited in independent claim 20 of the present application.

The Examiner acknowledges that Hirano et al. and the Applicant's Admitted Prior Art fails to teach the conductive layer being titanium, and asserts that Maki teaches the use of titanium as a pedestal material for the purpose of forming a temperature controlling section with superior thermal conductivity, electrical conductivity and formability. However, the Examiner's assertion that the first susceptor 12 of Hirano et al. is a ***titanium*** layer is contrary to certain teachings of Hirano et al.

For example, assuming *in arguendo* that the first susceptor 12 of Hirano et al. is modified by Maki to be a ***titanium*** layer, it is noted that Hirano et al. further discloses a conductive *cathode* ring 22, made of SiC or amorphous carbon, placed on the upper surface of the first susceptor 12. Fig. 2 of Hirano et al. shows that there is nothing disposed therebetween to electrically isolate the first susceptor 12 and the conductive cathode ring 22. Thus, continuing to assume that the first susceptor 12 is a ***titanium*** layer, one of ordinary skill in the art would acknowledge that the conductive cathode ring 22 electrically connects the first susceptor 12. If the first susceptor 12 were to connect the conductive cathode ring 22, the first susceptor 12 would therefore also serve as the *cathode* of the electric field. It is respectfully submitted that this would be *contradictory* to the description in column 5, lines 8-14 of Maki, that first susceptor 12 serves as the *anode* electrode. As is apparent to one of ordinary skill in the art, the same first susceptor 12 cannot be both an anode and a cathode. Thus, the Examiner is incorrect

in his assertion that the first susceptor 12 can be modified by Maki to be a ***titanium*** layer. One of ordinary skill in the art would not have been motivated to form a titanium first susceptor 12 based on the teachings of Maki. The prior art therefore does not teach or suggest "a titanium layer having a bottom portion embedded in the recess" as is recited in independent claim 20 of the present application.

With regard to Drage, this patent teaches a lower electrode 10 comprising an annular depression 11 defining a central pedestal 12 for receiving a semiconductor wafer, and a lower electrode 32 having a similar structure to the lower electrode 10. Drage does not teach or suggest that the central pedestal 12 is an "upper" portion. The Examiner's attention is drawn to the fact that the central pedestal 12 is as high as the ring 10, and central portion of the lower electrode 32 is as high as the edge thereof (see column 1, lines 25-27, column 3, line 16, and Figs. 1 and 3). Moreover, Drage does not teach or suggest an insulating base or the like embedded in the lower electrode 10 or 32. Since Drage does not teach or suggest an insulating base or the like embedded in the lower electrode 10 or 32, Drage cannot teach or suggest any relation between the insulating base or recess thereof and the lower electrode 10 or 32. Thus, the combination of Hirano et al. and Drage fails to teach or suggest "a titanium layer having a bottom portion embedded in the recess" as is recited in independent claim 20 of the present application.

In view of the foregoing amendments and remarks, it is respectfully submitted that the prior art utilized by the Examiner, either alone or in combination, fails to teach or suggest the pedestal of independent claim 20 of the present application, as well as its dependent claims.

Reconsideration and withdrawal of this portion of the 35 USC 103 rejections are respectfully requested.

Conclusion

Favorable reconsideration and an early Notice of Allowance are earnestly solicited.

In the event that any outstanding matters remain in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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